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ABSTRACT

The relationship between the importance of the objectives of a public school reading program and the extent of data collection efforts pertaining to these objectives was examined. The purpose of the study was to determine if the information collected was sufficient for teachers to make a continuous evaluation of the program's ability to meet the objectives. An instrument containing 102 reading objectives, the Reading Objective Information Inventory (ROII), was administered to 24 elementary teachers in 11 schools. Sixty objectives in the ROII were delineated as "important", and the availability of information to measure the achievement of these 60 objectives was assessed. Results showed that (1) the relationship between the importance of the objectives and the overall availability of information to measure their achievement correlated .55; (2) in evaluating the effectiveness of data collection for each of the objectives, only nine objectives reflected a significant relationship between importance and data availability; (3) in comparing the differences in data collection effectiveness among three kinds of objectives (word recognition, comprehension, and work study skills), the proportion of comprehension objectives with a significant importance-availability relationship was significantly higher than for word recognition or work study skills objectives. (VJ)

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A MEASURE OF THE APPROPRIATENESS OF DATA COLLECTION TECHNIQUES FOR CLASSROOM DECISION-MAKING

Presented at the Symposium

EVALUATING A SCHOOL READING PROGRAM

Thursday, April 22, 1971 4:00-5:00 p.m.

Statement of Problem

The data collection aspect of evaluation has been identified as a most crucial element in effective evaluation. Moreover, efforts to improve data collection systems must be developed within the context of the present data collection system. The primary purpose of this study was to determine the extent to which the data collection efforts in a large, urban, Midwestern public school system's Title I reading program were providing the information required for classroom teachers to make a continuous evaluation of the program's ability to meet instructional objectives.

The study was designed to provide an outline of the important objectives of the Title I reading program and an enumeration of those objectives for which information required to measure their achievement was being met through the present evaluation plan. The findings of the study could serve as the basis upon which recommendations for an improved data collection system could be made.

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Also, the techniques developed and validated for the purpose of identifying and classifying information requirements from program objectives should be applicable to programs other than reading. Accordingly, the techniques developed could be used in other program settings where there is an interest in analyzing the effectiveness of current evaluation efforts to meet the information requirements of classroom teachers to make effective decisions about reading instruction.

Design of the Study

The design of this study follows an evaluation paradigm rather than the more common experimental research designs.

The evaluation design developed for this study was based upon the decision-centered model of Guba and Stufflebeam (2). The essential aspects of that model which were adopted for this study were:

> (1) focusing the evaluation to identify the questions to be answered and the criteria to be employed in answering them, (2) collecting information, (3) organizing information, (4) analyzing information, and (5) reporting information (p. 15).

Consistent with that model, the design of this study included the process of posing questions and collecting information relative to the effectiveness of data collection efforts in the selected school district, organizing the information collected and establishing criteria for answering the questions posed, and posing hypotheses and identifying data treatment strategies for analyzing the information collected.

The questions posed in the study were:

1. What are the important objectives of the reading program in the selected school system?

2. What is the <u>overall</u> relationship between the relative importance of reading program objectives and the degree to which information is available to measure the achievement of those objectives?

3. What is the relationship between the relative importance of an objective and the degree to which information is available to

measure its achievement for <u>each</u> of the important reading program objectives?

4. To what extent does the effectiveness of the data collection efforts in the selected school district vary among the three major aspects of reading objectives as identified in the ROII, ie. word recognition, comprehension, and work study skills?

The statistical analysis of the information collected to answer the questions posed in the study demanded that those questions be stated in the form of testable hypotheses. Statistical techniques were applied to questions 2, 3, and 4 of the study. The hypotheses required to test the information relative to those questions were:

H_o 1. There is no significant correlation between the importance of reading program objectives and the availability of information to measure the achievent of those objectives.

H_o 2. There is no significant relationship between the importance of an objective of the reading program and the availability of information to measure its achievement.

H_o 3. There are no significant differences among the major aspects of reading, i. e. word recognition, comprehension, and work study skills in the proportions of objectives that achieved a significant relationship between their importance and the availability of information to measure their achievement under H_o 2.

<u>Procedures of the Study</u>

Twenty-four subjects were selected from among volunteers to participate in the study. These subjects represented four classroom teachers from each grade, one through six, and were drawn from 11 different Title I target schools in the school district in which the study was conducted.

The answer to the questions posed for this study required the collection of information relative to both the importance of the objectives of the reading programs in the classrooms of the selected subjects and the degrees to which information to measure the acheivement of those objectives was collected and available. Because the literature suggested no instrument and/or techniques were available to collect such information, the

investigator developed such an instrument.

That instrument, the Reading Objective Information Inventory, (ROII) was developed by outlining the skills covered by the reading objectives included in the Instructional Objectives Exchange Catalogs (1) for grades kindergarten through six, and then selecting one objective for each of the skills included in the outline. The objectives were either selected verbatum or were recast from one or more of the objectives included in the Instructional Objectives Exchange Catalogs covering the skills identified in the outline. This process resulted in 102 reading objectives being selected for inclusion in the ROII.

After selecting the objectives to be rated, scales were developed for rating both the importance of the objectives and the availability of information to measure their achievement. The ROII was then administered to the 24 subjects in order to collect information for the study to assess the effectiveness with which data to measure the objectives of the reading program were being collected.

Findings of the Study

The first requirement of the study design was the delineation of the "important" objectives of the reading program. This was accomplished by identifying those objectives on the ROII that achieved a mean importance rating of 1.5 or higher, the arbitrary criterion level established in the study for being considered important. Of the 102 objectives listed in the ROII , 60 achieved criterion level. These 60 objectives were thus identified as the objectives of the reading program for which the availability of information to measure their achievement would be assessed.

The first approach to assessing the effectiveness of data collection efforts was to consider the overall or general effectiveness of data

collection efforts in the selected school district. This was accomplished by measuring the relationship between the importance of reading program objectives and the availability of information to measure the achievement of those objectives. A Pearson product moment correlation coefficient of .55 was found between the two variables.

The second approach was to evaluate the effectiveness of data collection efforts for each of the 60 important reading objectives. This was accomplished by measuring the relationship between the importance of an objective and the availability of information to test its accomplishment. Two methods were used to identify those objectives having such a significant relationship. A Fisher exact probabilities test was computed to test the relationship between the importance of an objective and the availability of information to assess its achievement for each objective. Six objectives reflected a significant relationship through the test. The second method was to identify those objectives that achieved a mean availability rating (the degree to which information to measure their achievement was collected and available) that equaled or exceeded the arbitrary criterion level of 1.5 established for the study. Six objectives were identified with availability ratings reaching criterion level or higher.

A comparison of the 12 objectives identified through the two methods revealed that three of the 12 objectives identified through the two methods were common for both methods. The result, therefore, was that a total of nine different reading objectives reflected a significant relationship between their importance and the availability of information to measure their achievement.

The third approach to evaluating the effectiveness of data collection

efforts in the selected school system was to compare the differences in data collection effectiveness among three different aspects of reading program objectives, i.e. word recognition, comprehension, and work study skills. This was accomplished by determining whether or not a significantly different proportion of the objectives in each of these areas reflected significant importance-availability relationships. Of the nine objectives that reflected such relationships, three were word recognition objectives and six were comprehension objectives, paring the proportions that these figures reflected, i.e. three of 32 word recognition objectives, or .09; six of 14 comprehension objectives, or .49; and zero of 14 work study objectives, or .00; it was found that the proportions of comprehension objectives with significant importance-availability relationship was significantly higher than the proportion of such objectives for either word recognition or work study skills.

Conclusions of the Study

From the findings of the study it can be concluded that although there was a relationship between the importance of reading objectives in the selected school district and the degree to which information was available to measure the achievement of those objectives as reflected by the correlation coefficient of .55 that relationship was well below that which could reasonably be considered adequate. Accordingly, it can be stated that as a general conclusion of this study, efforts in the selected school system to collect data relative to the measurement of the achievement of the objectives of the Title I reading program in selected classrooms were inadequate.

This study found that adequate information was collected for measuring the achievement of only nine of the 60 important reading objectives. From these findings it can be concluded that a data collection effort which provides information to measure the achievement of only 15 per cent of the important objectives of a reading program, when a reasonable goal would be the collection of adequate information to assess the achievement of all objectives, is certainly inadequate.

From the findings of the study that information was available to measure the achievement of a significantly higher proportion of objectives in the area of comprehension than in either word recognition or work study, it can be concluded that data collection was more effective in providing information to measure the achievement of comprehension objectives than in providing information to measure the accomplishment of either word recognition or work study objectives.

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